

CORRESPONDENCE

Subject of Following Letter: Comments on Article on Syphilis, by Dr. James E. Potter, Printed in August California and Western Medicine

To the Editor:—In the August 1931 issue of CALIFORNIA AND WESTERN MEDICINE (page 97) Dr. James E. Potter published an interesting article entitled "Syphilis—The Treatment of Wassermann-Fast and Cerebrospinal by Modern Methods." In that article Doctor Potter advocated the intravenous use of a bismuth product. To the undersigned's viewpoint, such a method of administering bismuth is not in keeping with current practice and is possibly, I believe, a dangerous one.

At least five deaths have been reported as having immediately followed the intravenous use of bismuth compounds. One of these, reported by Curtis,¹ occurred immediately after the injection of the same product (Loeser) as was used by Doctor Potter. In discussing this case² one of our leading chemotherapists stated, "I have always been opposed to the employment of bismuth products intravenously, owing to their high toxicity by this route." Following this same article the editor of *The Journal of the American Medical Association* remarks that the Council on Pharmacy and Chemistry and *The Journal of the American Medical Association* had warned against intravenous bismuth therapy.

Magnus³ reported a sudden death following an intravenous injection of bismuth ammonium citrate. Likewise, Duchateau and Verstraeten⁴ reported two deaths immediately after the intravenous injection of an aqueous solution of tartrobismuthate. Fraenckel⁵ added another fatality attributable to intravenous bismuth therapy.

In a very exhaustive study, "Intravenous Injections of Bismuth Compounds in the Treatment of Syphilis," Klauder⁶ found that in the experimental animal the therapeutic dose closely approached the maximal tolerated dose. In other words, when given intravenously the bismuth compounds had a very low therapeutic index. Although he found that bismuth given intravenously was of value in human syphilis he was quite cautious in recommending this method of administration. He says: "Considering the greater toxicity of the drug when administered intravenously, which necessitated limitation of dosage, and its rapid excretion, it is doubtful whether the intravenous route is more effective in the therapy of syphilis than the intramuscular route."

In view of the above findings of high toxicity for the intravenous bismuth products, one would feel inclined to stick to the older, safer and extremely valuable intramuscular bismuth products; at least until some Ehrlich synthesizes a new compound of bismuth which when given intravenously will be of low toxicity and high therapeutic value. References enclosed.*

H. J. TEMPLETON, M. D., Oakland.

* REFERENCES

1. Curtis, Stephen H.: Sudden Death Following the Intravenous Injection of Bismuth Tartrate, *J. A. M. A.*, 95:1588, No. 21 (Nov. 22), 1930.
2. Raiziss, George W.: Sudden Death After Intravenous Use of Bismuth Tartrate, *J. A. M. A.*, 96:211, No. 3 (Jan. 17), 1931.
3. Magnus: Plotzlichen Todesfallnach Intravenosen Wis-meiteinspritzung, *Klin. Wchnschr.*, 3:1275, 1924.
4. Duchateau, M., and Verstraeten, P.: Les Injections Intraveineuses de Bismuth dans la Paralysie Generale, *J. de Neurol. et Psych.*, 9:567, 1925.
5. Fraenckel, P.: Two Cases of Sudden Death Following Intravenous Bismuth Injection, *Deutsche Ztschr. f. d. ges. gerichtl. Med.*, 5:5, 1925.
6. Klauder, J. V.: Intravenous Injections of Bismuth Compounds in the Treatment of Syphilis, *Arch. Derm. and Syph.*, 17:332.

Reply of Dr. James E. Potter
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October 20, 1931.

To the Editor:

1. The criticism of my article by Doctor Templeton insofar as it applies to the routine use of intravenous bismuth is both interesting and constructive.

2. However, it appears to put me in the position of advocating the use of intravenous injections of a bismuth compound as a routine measure in the treatment of syphilis. I desire to correct this impression by emphasizing the fact that I do not advocate such use as a routine measure, but would reserve it as a means of final resort in the type of cases to which I refer in my article. Every one of the ninety-three cases reported was unusual and ordinary medication had failed to control the disease.

3. One must naturally decide between watching one's patient deteriorate from the ravages of the disease and the use of other modalities in the hope of controlling it, even though some danger may be entailed by the employment of a more drastic medication.

4. In view of the gravity of the cases reported, I feel that the exposure of the patients to the extra hazard of the drugs used was indicated.

5. The dangers following the use of intravenous bismuth are clearly outlined in the article.

6. Many deleterious effects have been reported as following the use of neoarsphenamin, yet when used in properly selected cases it is recognized as an excellent routine measure.

7. Since submitting my article for publication, additional patients treated bring the total of my series to one hundred and fifty-one. No deaths or severe reactions have followed its administration.

8. Hence in view of the foregoing and in properly selected cases, where the rapid absorption of bismuth is indicated, I must conclude that the treatment as outlined in my article is productive of more satisfactory results than the older methods.

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Subject of Following Letter: The Importance of Doctor Reed's Article on the Need of a California Institute on Tropical Medicine †

To the Editor:—A splendid article by Dr. Alfred C. Reed on Tropical Medicine was printed in CALIFORNIA AND WESTERN MEDICINE, September 1931, p. 185.

While appreciating the discussions given Doctor Reed's article, it seemed to me to be worthy of a special consideration. There are no cities in the United States more exposed to the dangers to health and commerce by the entrance of tropical diseases than are San Francisco and Los Angeles. We are apt to think only in terms of yellow fever and Asiatic cholera, while many more important and subtle infestations are gaining hold in this part of the country to spread to other localities.

Every intestinal parasite and the horde of spirochaetal and other tropical body-borne diseases are brought in at each one of these ports daily. We are thus far fortunate that our California snails, ticks, cockroaches, flies, rats and mice, ants and parrots, are no more infested than they are. Noguchi has shown the ease of transmission and the danger to health of flagellates on plants.

Many of the fruits, vegetables, finished fabrics, farm materials and factory supplies need careful scrutiny and supervision as a health protective measure, and the safety of commerce itself. All of these products should be so safeguarded that they will not be incriminated as disease carriers. Commercial enterprises such as the growing of hemp, the manufac-

† See editorial comment in this number of California and Western Medicine, page 382.